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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/817,797

03/27/2001

Michael Hermann

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7590

05/30/2003

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EXAMINER

CHANG, AUDREY Y

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 05/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/817,797	HERMANN, MICHAEL	
	Examiner	Art Unit	
	Audrey Y. Chang	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Remark

- This Office Action is in response to applicant's amendment filed on March 24, 2003, which has been entered as paper number 7.
- By this amendment, the applicant has amended claims 1-3 and has newly added claim 4.
- Claims 1-4 remain pending in this application.
- The objections to the drawings set forth in the previous Office Action **still holds**.

Response to Amendment

1. The amendment filed on March 24, 2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: *claim 2 has been amended* to have the light source connected to the first element and the first and the second optoelectronic sensor *each* connected to the second element and having a "transmitting mirror". The specification **only** gives the support for embodiment depicted in Figure 4 with the first sensor connected to the second element and the second sensor connected to the *first* element to include a partially transmitting mirror, (please see Figure 4 and page 6). Furthermore, the specification only gives support for a "*partially transmitting mirror*" but not a "transmitting mirror". There is not such thing as "transmitting mirror". Clarifications are required.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

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pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. **Claim 2 is rejected under 35 U.S.C. 112, first paragraph**, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The reasons for rejection based on the newly added matters are set forth in the paragraph above.

4. **Claim 2 is rejected under 35 U.S.C. 112, first paragraph**, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to **enable** one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification fails to teach how could a mirror, known type of reflector, being “transmitting”.

Claim Objections

5. Claims 1-4 are objected to because of the following informalities:

(1) The phrase “*proportionally reflected*” recited in the claims is confusing since it is not clear what is the proportionality and with respect to what the proportion is referred to. It is not clear if this proportion is referred to the “position of the light source means”.

(2) The phrase “the *incidences* of the ... light beam” recited in claims are confusing. A better term “incident points of the light beams” is more correct.

(3) The phrase “the at least one masked light beam” recited in claim 3 is confusing since it lacks proper antecedent basis.

(4) The phrase “the first optoelectronic sensor” recited in claim 4 is confusing since it lacks proper antecedent basis.

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(5) Claim 2 fails to disclose how could the reflected light be reflected from first detector via the *transmitting mirror* to the second detector.

. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1, 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Holzl (PN. 5,026,998) in view of applicant admitted prior art.**

Holzl teaches an *alignment measurement mechanism* for measuring the relative positions between two shafts (1 and 2), serves as the two elements, wherein the mechanism comprises a *light source* (8) for generating a light beam (s) that incidents on a first and second opto-electronic detectors (9 and 10, Figures 2 and 3) that are connected to the second shaft (2). The two opto-electronic detectors are two-dimensional readable sensors that each generates two dimensional position signals as shown in Figure 2. **Holzl** further teaches that a *data converter* (3) and a *computer* (4), serve as the electronic means and computer, are included for processing the detected positional signal of the detectors to measure the relative position of the two shafts. The two dimensional position signals generated by each of the position detector are corresponding to the incident points of the light on each of the detector. The calculating electronics for computing the relative positions from the detected signals are implicitly included to determine the relative positions.

This reference has met all the limitations of the claim with the exception that it does not teach explicitly the arrangement of having the light incidents on the first detector to be *reflected* instead of

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transmitted to the second detector. However it is implicitly true that whether the light incident on the second detector is reflected or transmitted from the first detector the operational principle for obtaining the relative position between the two shafts or elements do not change. Since the principle is based on calculating the positional signals detected by the detectors about the incident points of the light on the detector. Furthermore, **applicant admitted prior art** teaches that a reflective type opto-electronic sensor such as CMOS sensor circuit is *commercially available*, (please see page 5 lines 14-20 of the specification). It would then have been obvious to one skilled in the art to use a reflective type of detector to make the light reflected from the first detector to the second detector for the benefit of providing a more compact system.

With regard to the housing, the references do not teach such explicitly however it would have been obvious to one skilled in the art to use a housing for the detectors for the benefit of blocking out unwanted light to reach the detectors so that the detectors detect the signals more accurately.

8. **Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Holzl in view of applicant admitted prior art and Cruz (PN. 4,243,877).**

Holzl teaches an *alignment measurement mechanism* for measuring the relative positions between *two shafts* (1 and 2), *serves as the two elements*, wherein the mechanism comprises a *light source* (8) for generating a light beam (s) that incidents on a first and second opto-electronic detectors (9 and 10, Figures 2 and 3) that are connected to the second shaft (2). The two opto-electronic detectors are two-dimensional readable sensor that each generates two dimensional position signals as shown in Figure 2. **Holzl** further teaches that a data converter (3) and a computer (4), serve as the electronic means and computer, are included for processing the detected positional signal of the detectors to measure the relative position of the two shafts. The two dimensional position signals generated by each of the position detector are corresponding to the incident points of the light on each of the detector. The

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calculating electronics for computing the relative positions from the detected signals are implicated included to determine the relative positions.

This reference has met all the limitations of the claim with the exception that it does not teach explicitly the arrangement having the light incidents on the first detector to be *reflected* instead of transmitted to the second detector. However it is implicitly true that whether the light incident on the second detector is reflected or transmitted from the first detector the operational principle for obtaining the relative position between the two shafts or elements do not change. Since the principle is based on calculating the positional signals detected by the detectors about the incident points of the light on the detector. Furthermore, **applicant admitted prior art** teaches that a reflective type opto-electronic sensor such as CMOS sensor circuit is *commercially available*, (please see page 5 lines 14-20 of the specification). It would then have been obvious to one skilled in the art to use a reflective type of detector to make the light reflected from the first detector to the second detector for the benefit of providing a more compact system.

With regard to the feature concerning "reflected via the transmitting mirror", the instant application fails to give a definite and operable structure to include such feature. It can therefore only be briefly addressed here. Cruz teaches an electro-optical target for an optical alignment system wherein a partially transmitting mirror (24) is used as the target for generating the position signal of the second element to the optical head assembly, (please see Figure 1), and at same time passes position information to the detector (22), (please see Figure 1).

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA

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1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1-4 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of copending Application No. 10/253,698.

Although the conflicting claims are not identical, they are not patentably distinct from each other because they each recited a device for measuring relative position of two elements with a light source and a first and second opto-electronic sensor wherein the light incident on the first sensor is reflected to the second sensor and electronic means for calculating the relative position of the light source with respect to the signals detected by the sensors.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

11. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

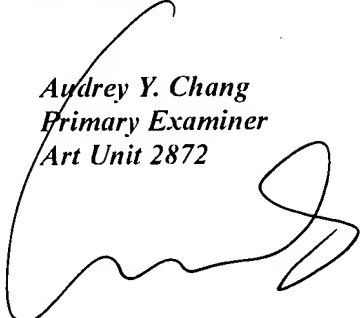
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Audrey Y. Chang whose telephone number is 703-305-6208. The examiner can normally be reached on Monday-Friday (8:00-4:30), alternative Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on 703-308-1637. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Audrey Y. Chang
Primary Examiner
Art Unit 2872



A. Chang, Ph.D.
May 22, 2003